



Windg. calc. card.: _____		motor No. <u>108817002</u>	
type: <u>DMA2-90L4</u>	Output: <u>1,5</u> kW	Duty type: <u>S1</u>	
Voltage: <u>400</u> V	conn. <u>Y</u>	frequency: <u>50</u> Hz	cosφ <u>0,78</u> IM <u>B3</u>
current: <u>3,53</u> A	speed: <u>1390</u> rpm	eff. <u>78,5</u> %	M of I <u>0,0033</u> kgm <sup>2</sup>
remarks:			

**Statorwinding resistance measurement ( cold ) :**

Connection: <u>Y</u>	$R_{u1-v1} :$ <u>7,56</u> Ω	
Winding temp: <u>17,5</u> °C	$R_{v1-w1} :$ <u>7,54</u> Ω	$R_{av} =$ <u>7,551</u> Ω ;
room temp: <u>17,5</u> °C	$R_{w1-u1} :$ <u>7,56</u> Ω	

**No-load test**

$R_{begin} =$  8,92 Ω  
 $R_{end} =$  8,92 Ω

				Losses		
$U_0$	$I_0$	$P_0$	$\cos\phi_0$	$V_{cu1}$	$V_{fe}$	$V_w$
V	A	W		W	W	W
473	4,53	472	0,127	274	179	19
438	3,23	282	0,115	140	123	19
400	2,35	178	0,109	74	85	19
358	1,76	121	0,111	41	61	19
310	1,36	86	0,118	25	42	19
253	1,02	60	0,134	14	27	19
179	0,65	39	0,194	6	14	19
127	0,45	30	0,303	3	8	19

sound pressure level in dB(A) ( at 1m ) : 58,8  
 sound power level in dB(A) : 66,8  
 vibration level (mm/s) :                       $x =$  0,7                       $y =$  0,6                       $z =$  0,6

**Temperature rise test**

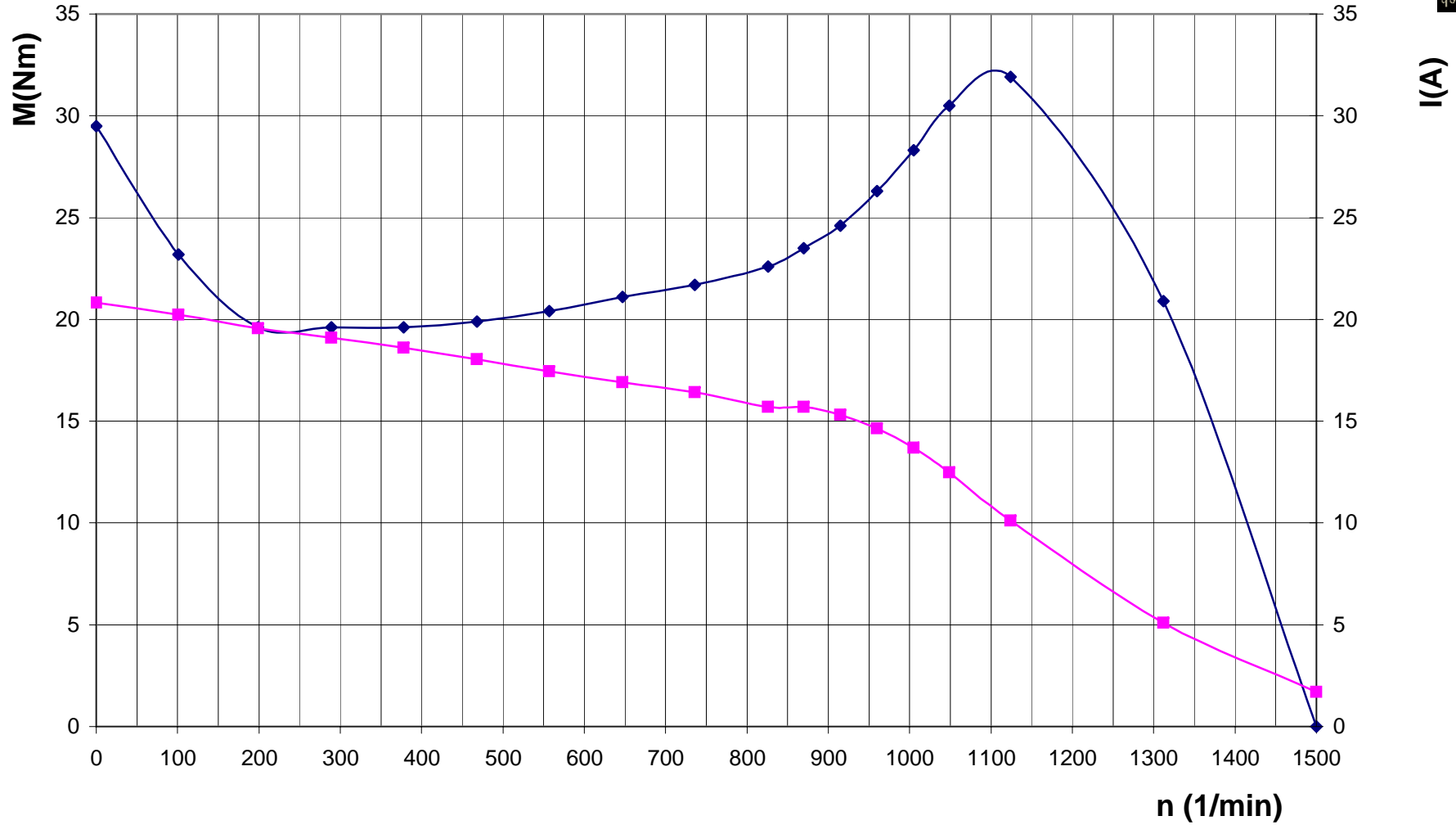
voltage : 400 V frequency: 50 Hz current 3,62 A connection : Y

		Room Temp. °C	$R_{wdg.}$ Ω	wdg. Temp. by $R_{wdg.}$	wdg. temp. rise (K)	measured Temperature (°C) with ETD*			
According to IEC 34 -1	time					wdg.	bearing DE	bearing NDE	frame
begin	7:45	17,5	7,56	17,8				17,5	
	9:05	18,0						40,5	
End	9:35	18,0	9,46	81,2	63,2	50	50	40,5	

\* ETD = embedded temperature detector

EFF 2

### DMA2-90L4 Y400V 50HZ 1,5kW





## Load test

## DMA2-90L4

frequency : 50 Hz

connection : Y

$t_{wdg,av} = 80,9$  °C

$R_{av} = 9,45$  Ω

P <sub>2</sub> approx. %	U V	I A	P <sub>1</sub> kW	cosφ	n min <sup>-1</sup>	s %	Losses						P <sub>2</sub> kW	η %
							V <sub>fe</sub> W	V <sub>cu,1</sub> W	V <sub>e</sub> 0,78	V <sub>cu,2</sub> W	V <sub>w</sub> W	V <sub>v</sub> W		
25	400	2,46	0,568	0,333	1489	0,73	85	86	4	3	19	197	0,371	65,29
50	400	2,65	0,977	0,532	1458	2,80	85	100	5	22	19	231	0,746	76,38
75	400	3,03	1,419	0,676	1431	4,60	85	130	7	55	19	296	1,123	79,14
100	400	3,57	1,902	0,769	1400	6,67	85	181	9	108	19	402	1,500	78,84
125	400	4,26	2,459	0,833	1353	9,80	85	257	13	206	19	581	1,878	76,39
150	400	5,13	3,149	0,886	1280	14,7	85	373	19	392	19	888	2,261	71,80
100	440	3,99	2,010	0,661	1422	5,20	125	226	12	86	19	467	1,543	76,77
100	420	3,73	1,954	0,720	1412	5,87	102	197	10	96	19	425	1,529	78,26
100	380	3,60	1,928	0,814	1385	7,67	72	184	9	127	19	412	1,516	78,65
100	360	3,68	1,945	0,848	1364	9,07	61	192	10	153	19	434	1,511	77,67

## Torque/speed and Current/speed test

voltage : 400 V

frequency: 50 Hz

connection : Y

n min <sup>-1</sup>	T Nm	I A	n min <sup>-1</sup>	T Nm	I A	n min <sup>-1</sup>	T Nm	I A
1500	0,0	1,7	915	24,6	15,3	468	19,9	18,0
1312	20,9	5,1	870	23,5	15,7	378	19,6	18,6
1124	31,9	10,1	826	22,6	15,7	289	19,6	19,1
1049	30,5	12,5	736	21,7	16,4	199	19,6	19,6
1005	28,3	13,7	647	21,1	16,9	101	23,2	20,2
960	26,3	14,65	557	20,4	17,5	0	29,5	20,8

## Locked rotor test

wdg. temp. °C	U V	I A	P <sub>1</sub> kW	cosφ	T Nm
32,7	400	20,81	10,449	0,725	33,9
38,8	350	17,29	7,505	0,716	24,1
37,8	300	14,06	5,129	0,702	16,3
36,3	250	11,11	3,273	0,680	10,3
32,5	200	8,40	1,891	0,650	5,8
30,6	100	3,65	0,362	0,573	0,9



Date: 17-4-2001

Name: HvD

Signature: